OWNER'S MANUAL
MANUALE UTENTE

SUB 8003-AS MK3
SUB 905-AS MK3

PROFESSIONAL ACTIVE SUBWOOFER

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ENGLISH

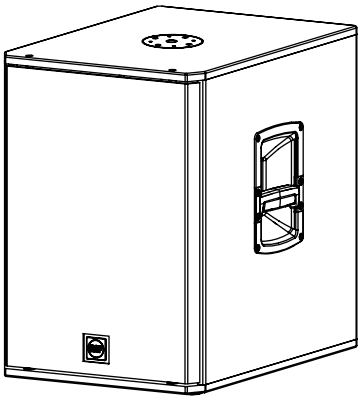
ITALIANO

2. DESCRIPTION

SUB 8003-AS MK3 | SUB 905-AS MK3 | PROFESSIONAL ACTIVE SUBWOOFERS

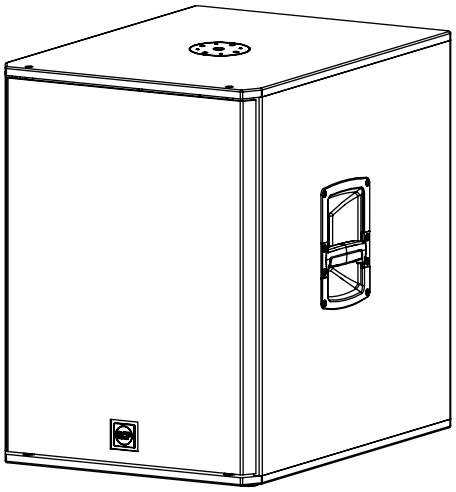
SUB 8003-AS MK3 and SUB 905-AS MK3 are high power, high output active subwoofer systems that set a new standard in professional sound reinforcement. Each transducer has been specifically designed for the application. The woofer provides large excursion and very lightweight.

RCF always has the performer's needs at the forefront of the design in order to create new lines of speakers with renewed features, improved sound clarity and definition and even lighter weight systems. Every detail of the Sub Series has been carefully studied in order to offer musicians and professionals the perfect tool to amplify their performance, night after night. High quality materials, precise manufacturing, careful assembly and extensive quality control procedures complete the groundbreaking design work of the RCF R&D team.
All transducers are precision built taking advantage of RCF's superior moulding, assembly technologies and a wealth of professional knowledge and experience dedicated to achieving extremely high standards. All the transducers in Sub Series speakers feature high power magnets in order to guarantee the best performance and power handling. Sub Series Subwoofers are equipped with a new generation of Class-D Amplifiers. The result of this is very high output, extremely low distortion and an incredible natural sound.
The amplifier features a solid mechanical aluminium structure which not only stabilize the amplifier during transportation but also assist in the heat dissipation.
The new loudspeaker design looks aggressive whilst retaining perfect ergonomics and is the result of extensive combined functional and acoustic research.
The Sub Series Subwoofer cabinets are built in polyurea coated birch plywood and are designed to dampen down vibrations even at maximum volume settings.
The reflex porting has been resized to offer a better efficiency. The cabinets are equipped with ergonomically designed forged aluminium handles with rubber handgrip. Rugged steel pole mount has been installed in all models.



SUB 905-AS MK3

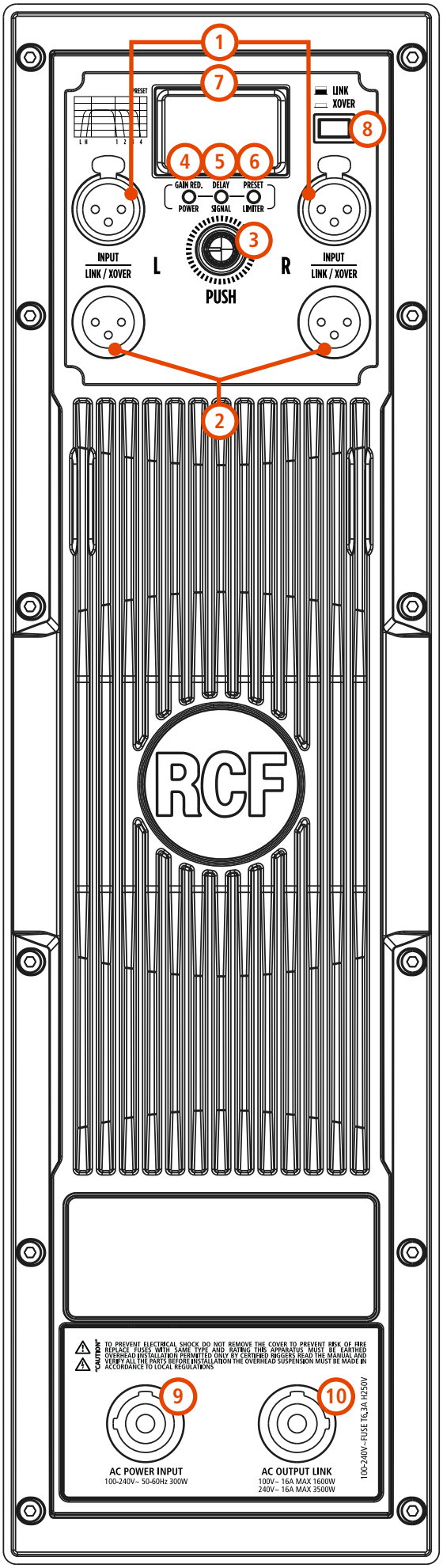
2200 Watt
15" Woofer
26 Kg (57,32 lbs)



SUB 8003-AS MK3

2200 Watt
18" Woofer
37,6 Kg (82,89 lbs)

3. REAR PANEL FEATURES AND CONTROLS



1 **FEMALE XLR INPUTS L and R** The system accepts XLR input connectors.

2 **MALE XLR SIGNAL OUTPUTS** The output XLR connectors provide a loop through for speakers daisy chaining. The balanced connectors are connected in parallel, and can be used to send the audio signal to other amplified speakers or supplementary amplifiers.

3 **SYSTEM SET UP ENCODER**

4 **GAIN REDUCTION / POWER LED**

- **POWER LED** This green LED lights up when the speaker is connected to the main power supply.
- **GAIN REDUCTION LED** Pushing the encoder once, the gain reduction indicator lights up green. Then, rotating the encoder, the gain level can be set to the right level.

5 **DELAY / SIGNAL LED**

- **DELAY LED** Pushing the encoder twice, the delay indicator lights up green. Then, rotate the encoder to delay the speaker. The delay is expressed in meters.
- **SIGNAL LED** This indicator lights up green if there is an audio signal on the main.

6 **PRESET / LIMITER LED**

- **PRESET LED** Pushing the encoder three times, the preset indicator lights up green. Then rotate the encoder to load the right preset to the speaker.
- **LIMITER LED** The amplifier has a built-in limiter circuit to prevent any amplifier clipping or transducers overdrive. When the soft clipping circuit is active, the LED blinks RED. It is okay if the limiter LED blinks occasionally. If the LED lights continuously, turn down the signal level.

7 **SYSTEM SET UP DISPLAY** It displays the system setting values.

8 **LINK/XOVER SELECTOR** When the selector is set to LINK position, the input signal is sent directly to the output signal. When the selector is set in XOVER position, a crossovered signal will be applied to the outputs to optimize the signal sent to any speaker connected.

9 **AC POWER INPUT** Powercon locking 3-pole AC mains.

10 **AC OUTPUT LINK** Sends the AC power to another speaker.
Power link: 100-120V~16 A MAX 1600W I 200-240V~16 A MAX 3500W.

WARNING! CAUTION! Loudspeaker connections should be only made by qualified and experienced personnel having the technical know-how or enough specific instructions (to ensure that connections are made correctly) in order to prevent any electrical danger.

To prevent any risk of electric shock, do not connect loudspeakers when the amplifier is switched on.

Before turning the system on, check all connections and make sure there are no accidental short circuits.

The entire sound system shall be designed and installed in compliance with the current local laws and regulations regarding electrical systems.

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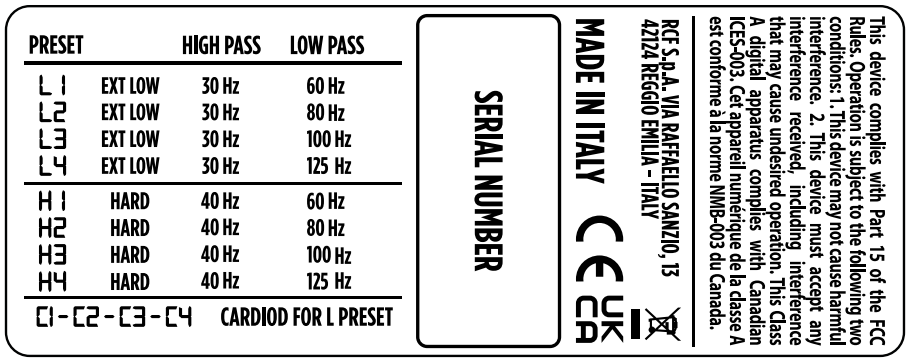
4. SET-UP

Pushing the rear encoder, it is possible to select the following three functions:
INPUT GAIN REDUCTION
SPEAKER DELAY SETTING
SELECTION OF A SPEAKER PRESET

Pushing once the rear encoder the GAIN REDUCTION LED will light up. Now rotating the encoder counter clockwise, it will be possible to reduce the input gain. The gain reduction will be in steps of 0,1 dB for the first 10 dB and then in 1 dB steps. The maximum reduction is 99 dB.

Pushing a second time the rear encoder the DELAY LED will light up. Now rotating the encoder clockwise it will be possible to delay the signal output of the speaker. The delay is expressed in meter. The delay will be in steps of 0,1 m for the first 10 m and then in 1 m steps. The maximum delay will be 20 meter.
Pushing a third time the rear encoder the PRESET LED will light up. Now rotating the encoder clockwise it will be possible to select a preset:



EXTENDED LOW PRESETS (more extended and linear frequency response):

L1	30 Hz – 60 Hz	L2	30 Hz – 80 Hz
L3	30 Hz – 100 Hz	L4	30 Hz – 125 Hz

HARD PRESETS (less extended frequency response, more pressure at 50-60 Hz):

H1	40 Hz – 60 Hz	H2	40 Hz – 80 Hz
H3	40 Hz – 100 Hz	H4	40 Hz – 125 Hz

CARDIOID PRESETS (in combination with L presets)

C1	30 Hz – 60 Hz	C2	30 Hz – 80 Hz
C3	30 Hz – 100 Hz	C4	30 Hz – 125 Hz

SAVING A SPEAKER PRESET

After the parameter settings the two digits display will flash one time. This represent saving all the preset values in the speaker memory. Once saved, all the speaker settings are permanent. It is possible to turn off and turn on; the speaker will remember the last settings.

CARDIOID SET-UP

It is possible to create subwoofer cardioid systems using groups of two or three modules.

A group of two modules shall be made as follow:

- Only use one of the L presets (30 Hz High Pass filter)
- 1 modules pointing in forward direction
- 1 module pointing in backward direction, correspondent cardioid preset
- The modules shall have the same settings (system delay, sensitivity, preset)

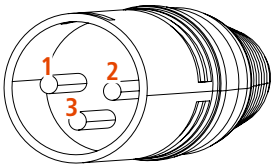
A group of three modules shall be made as follow:

- Only use one of the L presets (30 Hz High Pass filter)
- 2 modules pointing in forward direction
- 1 module pointing in backward direction, correspondent cardioid preset
- The modules shall have the same settings (system delay, preset)
- The 2 front modules shall have -1.5 dB gain less than the rear module.

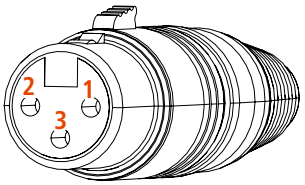
5. CONNECTIONS

The connectors must be wired according to the standards specified by the AES (Audio Engineering Society).

MALE XLR CONNECTOR
Balanced wiring



FEMALE XLR CONNECTOR
Balanced wiring



PIN 1 = GROUND (SHIELD)
PIN 2 = HOT (+)
PIN 3 = COLD (-)

BEFORE CONNECTING THE SPEAKER

On the rear panel you will find all the controls, signal and power inputs. At first verify the voltage label applied to the rear panel (115 Volt or 230 Volt). The label indicates the right voltage. If you read a wrong voltage on the label or if you can't find the label at all, please call your vendor or authorized RCF SERVICE CENTRE before connecting the speaker. This fast check will avoid any damage.
In case of need of changing the voltage please call your vendor or authorized RCF SERVICE CENTRE. This operation requires the replacement of the fuse value and is reserved to an RCF SERVICE CENTRE.

BEFORE TURNING ON THE SPEAKER

You can now connect the power supply cable and the signal cable. Before turning on the speaker make sure the volume control is at the minimum level (even on the mixer output). It is important that the mixer is already ON before turning on the speaker. This will avoid damages to the speaker and noisy "bumps" due to turning on parts on the audio chain. It is a good practice to always turn on the speakers at last and turning them off immediately after their use. You can now turn ON the speaker and adjust the volume control to a proper level.

PROTECTIONS

These RCF active speakers are equipped with a complete system of protection circuits. The circuit is acting very gently on audio signal, controlling level and maintaining distortion at acceptable level.

VOLTAGE SETUP (RESERVED TO THE RCF SERVICE CENTRE)

220-240 Volt, 50 Hz SETUP: FUSE VALUE T6,30 A - 250V

110-120 Volt, 60 Hz SETUP: FUSE VALUE T6,30 A - 250V

6. TROUBLESHOOTING

THE SPEAKER DOESN'T TURN ON
Make sure the speaker is switched on and connected to an active AC power

THE SPEAKER IS CONNECTED TO AN ACTIVE AC POWER BUT DOESN'T TURN ON
Make sure the power cable is intact and connected correctly.

THE SPEAKER IS ON BUT DOESN'T MAKE ANY SOUND
Check if the signal source is sending correctly and if the signal cables are not damaged.

THE SOUND IS DISTORTED AND THE OVERLOAD LED BLINKS FREQUENTLY
Turn down the output level of the mixer.

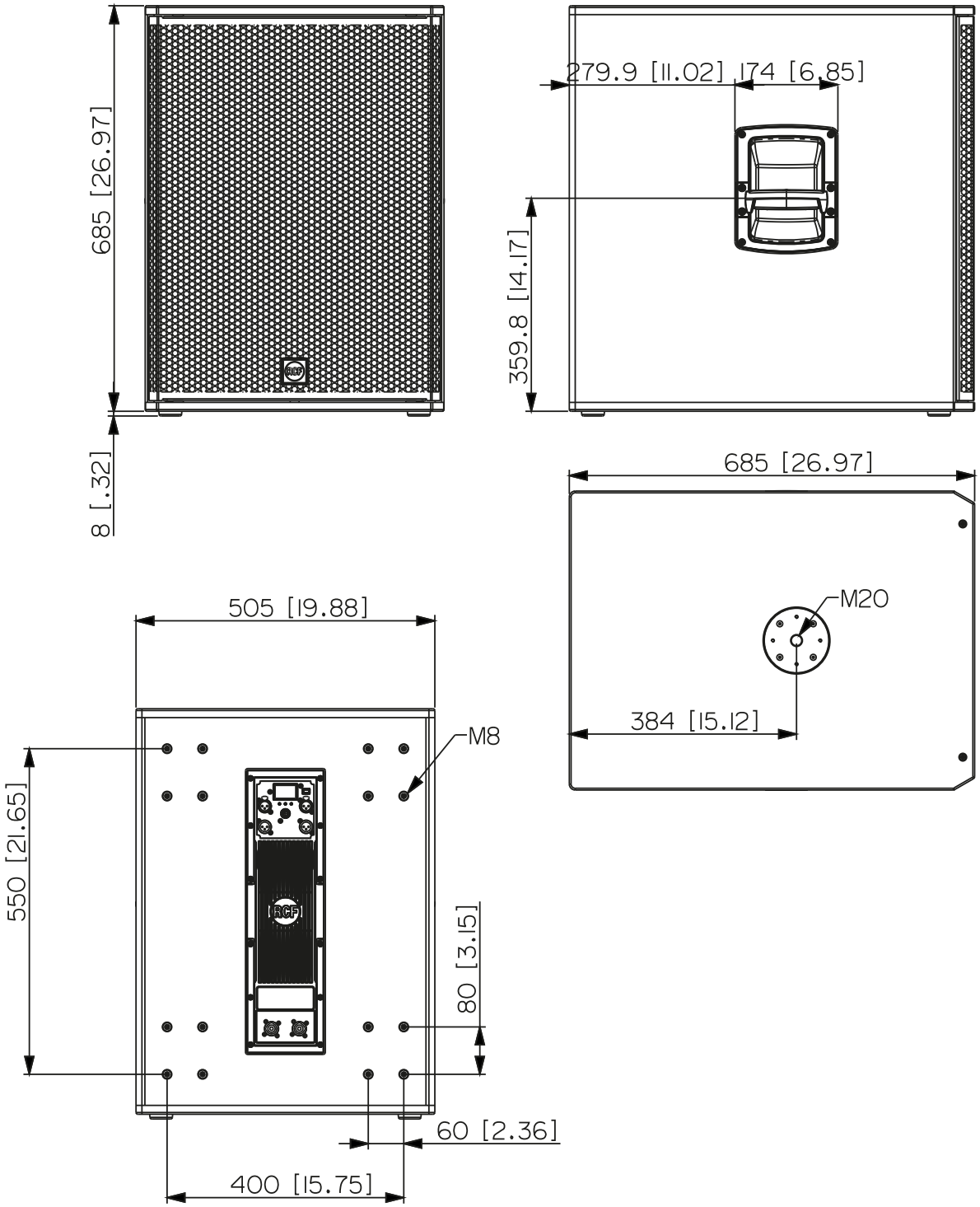
THE SOUND IS VERY LOW AND HISSING
The source gain or the output level of the mixer might be too low.

THE SOUND IS HISSING EVEN AT PROPER GAIN AND VOLUME
The source might send a low quality or noisy signal

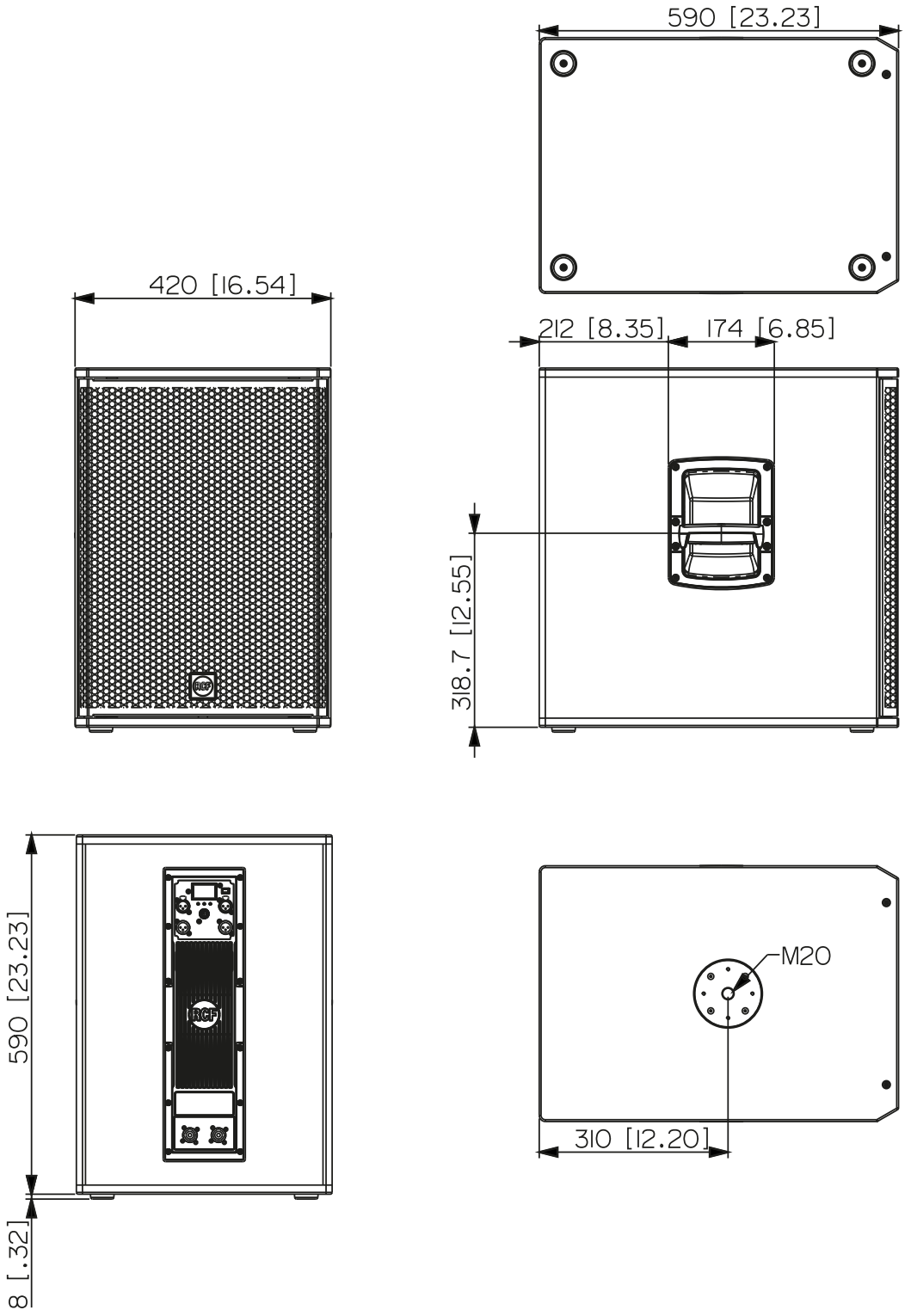
HUMMING OR BUZZING NOISE
Check out the AC grounding and all the equipments connected to the mixer input including cables and connectors.

WARNING! to reduce the risk of electric shock, do not disassemble this product unless you are qualified. Refer servicing to qualified service personnel.

DIMENSIONS - SUB 8003-AS MK3



DIMENSIONS - SUB 905-AS MK3



SPECIFICATIONS

TECHNICAL SPECIFICATIONS		SUB 8003-AS MK3	SUB 905-AS MK3
Acoustical specifications	Frequency Response:	35 Hz ÷ 120 Hz	40 Hz ÷ 120 Hz
	Max SPL @ 1m:	135 dB	133 dB
Transducers	Woofer:	18", 4.0" v.c	15", 3.0" v.c
Input/Output section	Input signal:	bal/unbal	bal/unbal
	Input connectors:	XLR	XRL Stereo
	Output connectors:	XLR	XRL Stereo
	Input sensitivity:	-2 dBu/+4 dBu	-2 dBu/+4 dBu
Processor section	Crossover Frequencies:	Selectable	Selectable
	Protections:	Thermal, RMS	Thermal, RMS
	Limiter:	Soft Limiter	Soft Limiter
	Controls:	Gain, EQ, Phase, Xover, Delay, Cardioid	Gain, EQ, Phase, Xover, Delay, Cardioid
Power section	Total Power:	2200 W Peak	2200 W Peak, 1100 W RMS
	Cooling:	Convection	Convection
	Connections:	Powercon IN/OUT	Powercon IN/OUT
Standard compliance	Safety agency:	CE compliant	CE compliant
Physical specifications	Cabinet/Case Material:	Plywood	Plywood
	Handles:	One handle each side	One handle each side
	Grille:	Steel with clothing	Steel with clothing
	Color:	Black	Black
Size	Height:	693 mm / 27.28 inches	590 mm / 23.23 inches
	Width:	505 mm / 19.88 inches	420 mm / 16.54 inches
	Depth:	685 mm / 26.97 inches	590 mm / 23.23 inches
	Weight:	37.6 kg / 82.89 lbs	26 kg / 57.32 lbs

RCF S.p.A. Via Raffaello Sanzio, 13 - 42124 Reggio Emilia - Italy
Tel +39 0522 274 411 - Fax +39 0522 232 428 - e-mail: info@rcf.it - **www.rcf.it**

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